

CHAPTER FIVE

CLUTCH

This chapter contains service procedures for the centrifugal and mechanical clutch assemblies.

Table 1 and **Table 2** are at the end of this chapter.

CLUTCH OPERATION

The engine is equipped with a centrifugal and manual clutch mechanism to transmit power from the engine to the transmission. Both clutch types are immersed in the oil supply they share with the engine and transmission.

Centrifugal and Manual Clutch Operation

The centrifugal clutch is mounted on the right-hand end of the crankshaft. The main components of this clutch are the outer drum, centrifugal clutch weights and a one-way sprag which allows the

clutch outer housing to rotate in one direction only. The outer housing is not driven directly by the crankshaft, but by the centrifugal clutch weights attached to a hub that is splined to the crankshaft. As the engine rpm increases, the centrifugal weights are forced out against the outer drum, thus driving and rotating the outer drum. Complete engagement is achieved when engine speed reaches about 2,800 rpm. When engine speed decreases; the springs retract the weights to disengage the weights from the outer drum. On the backside of the outer drum is the primary drive gear that is geared directly to the manual clutch outer housing. The one-way sprag not only allows the outer housing to rotate in one direction, but also allows engine compression to be used to slow down the vehicle when the centrifugal clutch weights are not engaged (when coasting).

The manual clutch is a wet multiplate type and is activated by the gearshift linkage. The clutch outer

housing is driven by the centrifugal clutch while the clutch center is splined to the transmission main shaft. When the gearshift lever is moved to shift gears it also activates the clutch lifting mechanism, releasing the clutch.

Both clutch mechanisms can be removed with the engine in the frame.

CENTRIFUGAL CLUTCH

NOTE

Honda has determined that there may be a problem with some 1988-1990 2-wheel and 4-wheel drive models. If there is a grinding noise from the right-hand side of the engine, or if the engine will not idle in gear, or if the vehicle stalls when put into gear or when coming to a stop this problem may exist. Any of these situations may be caused by the failure of the one-way clutch to operate correctly. This problem was covered in the Honda Service Bulletin TRX300 & TRX300FW # 1, August 1990. If you are having this problem and the vehicle is still covered by any applicable warranty, take the vehicle to the Honda dealer and have the problem corrected.

Removal

Refer to **Figure 1** for this procedure.

1. Remove the right-hand crankcase cover as described in Chapter Four.

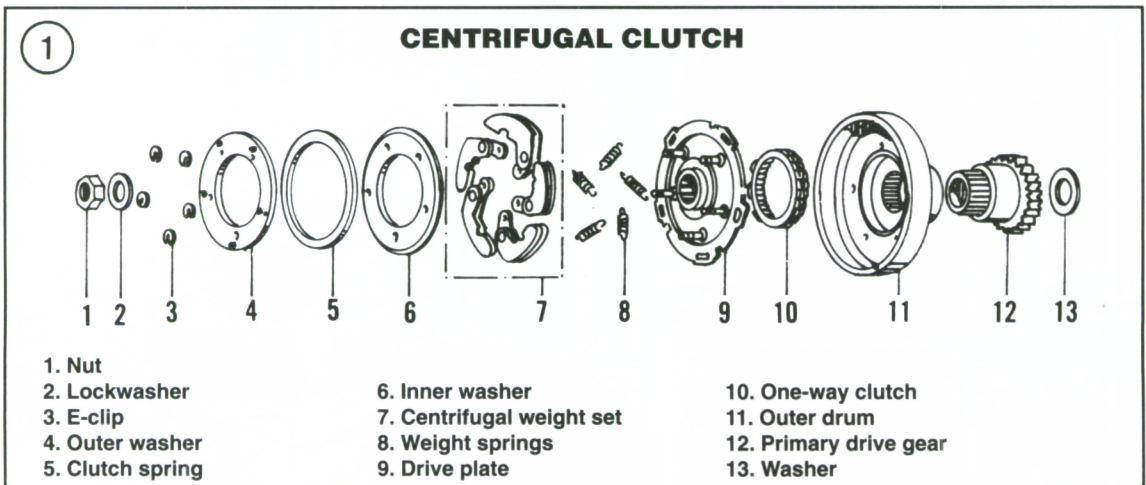
CAUTION

*The locknut has **left-hand** threads. Loosen it by turning it **clockwise**.*

2. Use a chisel and hammer and carefully unstake the locknut.
3. The locknut had loctite applied to it during assembly. Use an impact driver and remove the locknut (**Figure 2**) securing the centrifugal weight assembly—remember to turn the impact driver *clockwise*. Remove the nut and lockwasher.
4. Remove the centrifugal weight assembly and the outer drum from the end of the crankshaft.

Inspection

1. Separate the centrifugal weight assembly from the outer drum.
2. Clean all parts in petroleum-based solvent such as kerosene and thoroughly dry with compressed air.
3. Measure the thickness of the centrifugal weight lining (**Figure 3**) on all 5 weights. Refer to **Table 1** for specification. If the lining on one of the weights is worn to the service limit or less, replace all 5 weights as a set (they are only available as a set of 5) as described in this chapter.
4. Rotate the one-way clutch (**Figure 4**). It should only rotate *clockwise*. If it will rotate counterclockwise, even the slightest amount, it is defective and must be replaced.
5. Measure the inside diameter of the outer drum with a vernier caliper. Refer to **Table 1** for specifications. Replace if it is worn to the service limit or greater.



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